

FCC DOCKET IB NO. 97-142
AFFIDAVIT OF WILLIAM H. LEHR

Exhibit 1

WILLIAM HERNDON LEHR
Curriculum Vitae

PERSONAL INFORMATION:

Residence

94 Hubbard Street
Concord, MA 01742
(508)-287-0525
(508)-287-5467 (fax)
wlehr@usa.pipeline.com

EDUCATION

Ph.D., Economics, Stanford University, 1992.
M.B.A., with distinction, The Wharton School, University of
Pennsylvania, 1984.
M.S.E., Chemical Engineering, University of Pennsylvania,
1984.
B.S., Chemical Engineering, *cum laude*, University of
Pennsylvania, 1979.
B.A., European History, *magna cum laude*, University of
Pennsylvania, 1979.

Academic Honors: Graduate Student Research Award,
Telecommunications Policy Research Conference, 1991; Lynde
and Harry Bradley Foundation Fellowship, 1990; Stanford
Fellowship, 1987

PROFESSIONAL EXPERIENCE

Graduate School of Business, Columbia University (New York,
NY), Adjunct Associate Research Professor of Finance and
Economics, 1997-present; Assistant Professor of Finance and
Economics, July 1991 to December 1996.

Internet Telephony and Interoperability Consortium, Center
for Technology, Policy and Industrial Development,
Massachusetts Institute of Technology (Cambridge, MA),
Consultant, January 1997-present.

RAND Corporation (Santa Monica, CA), Graduate Student
Intern, Summer 1990.

Economic Analysis Group, Ltd. (Washington, DC), Senior
Consultant, 1986-1987.

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"Baghdad 2000" Master Development Plan (Baghdad, Iraq),
Economist and Systems Analyst, 1985-1986.

M.C.I. Telecommunications (Washington, DC), Manager of
Financial Analysis, 1985; Senior Financial Analyst, 1984.

Office of Management and Budget, National Security Division
(Washington, DC), Graduate Student Intern, Summer 1983.

Putnam, Hayes and Bartlett (Cambridge, MA), Research
Associate 1980-1982.

TEACHING EXPERIENCE

Economics and Strategy in Media Industries, 1993-1995
Economics of Strategic Management, 1993
Managerial Economics, 1991-1995
Theory of the Firm (teaching assistant for Paul Milgrom),
1989

PAPERS and PUBLICATIONS

"Computer Use and Productivity Growth in Federal Government
Agencies, 1987 to 1992", with Frank Lichtenberg, National
Bureau of Economic Research, Working Paper #5616, June 1996.

"The Political Economy of Congestion Charges in Packet
Networks", with Martin Weiss, forthcoming in
Telecommunications Policy.

"Compatibility Standards and Interoperability: Lessons from
the Internet", in Standards Policy for Information
Infrastructure, edited by B. Kahin and J. Abbate, Harvard
Information Infrastructure Project, Cambridge MA: MIT Press,
1995.

Quality and Reliability of Telecommunication Infrastructure
(editor), Hillsdale, NJ: Lawrence Erlbaum Associates, 1995.

"The Quality of Complex Systems and Industry Structure",
with Nicholas Economides, in Quality and Reliability of
Telecommunication Infrastructure, edited by William Lehr,
Hillsdale, NJ: Lawrence Erlbaum Associates, 1995.

"Compatibility Standards and Industry Competition: Two Case
Studies", Economics of Innovation and New Technology.

"Quality Choices in a Network of Networks", forthcoming in
Private Networks and Public Objectives (Eli Noam, editor),
Columbia University.

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1 "ISDN in the U.S.A.: Is it Arriving at Last?", in *ISDN in*
2 *the USA, Japan, Singapore and Europe*, edited by Bernd Lange,
3 The European Institute for the Media, forthcoming.

4
5 "Compatibility Standards and the Internet", working paper,
6 September 1992,

7
8 "Standardization: Understanding the Process", Journal of the
9 American Society for Information Science, vol 43, no 8
10 (September 1992) 550-555.

11
12 "Voluntary Standard Setting, Institutions and the Allocation
13 of Technical Capabilities", working paper, July 1992.

14
15 "ISDN and the Small User: Regulatory Policy Issues", with
16 Roger Noll, in Integrated Broadband Networks: the Public
17 Policy Issues, edited by Martin Elton, North-Holland, New
18 York, 1991, 147-178.

19
20 "Incremental Costs and the Efficient Pricing of Local
21 Exchange Services: A Synopsis of the Incremental Cost
22 Conference", Center for Economic Policy Research Working
23 Paper #175, Stanford University, January 1990.

24
25 "Vertical Integration in the Cable Television Industry: the
26 Issue of Content/Carrier
27 Separation", WD-5100-MF, RAND Corporation, Santa Monica, CA,
28 August 1990.

29
30 "ISDN: an Economists' Primer to a New Telecommunications
31 Technology", working paper, February 1989.

32
33 **WORK in PROGRESS**

34
35 "Economics of Anticipatory Standard Setting", working draft,
36 presented at the European Association of Research in
37 Industrial Economics (E.A.R.I.E.) Conference, Chania, Crete,
38 September 1994.

39
40 "Political Economics of Voluntary Standard Setting", working
41 draft, January 1992.

Exhibit 2: Market Impact of Foreign Entry

"Foreign carrier acquires 10% of US market and stimulates \$0.10 per minute price cut"

	Base case: before entry		Post-entry: after price cut		
	US industry	Foreign Carrier	US industry (except foreign sub)	US-based foreign subsidiary	Foreign carrier
Revenues					
Outbound traffic	\$400,000		\$317,250	\$ 35,250	
Settlements		\$250,000			\$293,750
Resale revenue					
Costs					
Wholesale costs	\$100,000	\$100,000	\$105,750	\$ 11,750	\$117,500
Retail-level costs	\$ 50,000		\$ 52,875	\$ 5,875	
Settlements	\$250,000		\$264,375	\$ 29,375	
Reseller costs					\$117,500
Total Costs	\$400,000	\$100,000	\$423,000	\$ 47,000	
Excess profit(loss)	\$0	\$150,000	(\$105,750)	(\$ 11,750)	\$176,250
Assumptions:					
Minutes outbound ¹	1,000,000		1,057,500	117,500	
Wholesale costs ²	\$0.10				
Retail-level costs ²	\$0.05				
Settlement rate ²	\$0.25				
Wholesale price ²	\$0.35				
Resale price ²	\$0.40		\$0.30		
Elasticity	0.7				
Share US Market	100%		90%	10%	

¹ Price cut of \$0.10 is 25% price cut. With elasticity of 0.7, this stimulates 175,000 additional minutes. For ease of computation this example ignores inbound traffic.

² Per minute.

Exhibit 3 : Market Impact of Foreign Entry via resale

"Foreign carrier acquires 10% of US market and stimulates \$0.10 per minute price cut"

	Base case: before entry		Post-entry: after price cut entry via resale		
	US industry	Foreign Carrier	US industry (except foreign sub)	US-based foreign subsidiary	Foreign carrier
Revenues					
Outbound traffic	\$400,000		\$317,250	\$ 35,250	
Settlements		\$250,000			\$293,750
Resale revenue			\$41,125		
Costs					
Wholesale costs	\$100,000	\$100,000	\$117,500		\$117,500
Retail-level costs	\$ 50,000		\$ 52,875	\$ 5,875	
Settlements	\$250,000		\$293,750		
Reseller costs				\$ 41,125	\$117,500
Total Costs	\$400,000	\$100,000	\$464,125	\$ 47,000	
Excess profit(loss)	\$0	\$150,000	(\$105,750)	(\$ 11,750)	\$176,250
Assumptions:					
Minutes outbound ¹	1,000,000		1,057,500	117,500	
Wholesale costs ²	\$0.10				
Retail-level costs ²	\$0.05				
Settlement rate ²	\$0.25				
Wholesale price ²	\$0.35				
Resale price ²	\$0.40		\$0.30		
Elasticity	0.7				
Share US Market	100%		90%	10%	

¹ Price cut of \$0.10 is 25% price cut. With elasticity of 0.7, this stimulates 175,000 additional minutes. For ease of computation this example ignores inbound traffic.

² Per minute.

CERTIFICATE OF SERVICE

I, Helen Elia, do hereby certify that on this 9th day of July, 1997 a copy of the foregoing "Comments" was mailed by U.S. first class mail, postage prepaid, upon the parties on the attached service list:

/s/ Helen Elia
Helen Elia

SERVICE LIST

Ambassador Vonya B. McCann
United States Coordinator
Bureau of International
Communications and
Information Policy
Department of State
Room 4826
2201 C Street, N.W.
Washington, DC 20520-1428

Joan Donoghue
Assistant Legal Adviser for
Economic, Business and
Communications Affairs
Office of the Legal Adviser
2201 C Street, N.W.
Department of State
Washington, DC 20520-6310

Robin R. Layton
ITA
Department of Commerce
Room 4324
14th St. & Constitution NW
Washington, DC 20230

Richard Beaird
Bureau of International
Communications and
Information Policy
Department of State
Room 4836
2201 C Street, N.W.
Washington, DC 20520-1428

Steven Lett
Bureau of International
Communications and
Information Policy
Department of State
Room 4826
2201 C Street, N.W.
Washington, DC 20520-1428

Anthony Cina
Bureau of International
Communications and
Information Policy
Department of State
Room 4826
2201 C Street, N.W.
Washington, DC 20520-1428

Gary Couey
Bureau of International
Communications and Information
Policy
Department of State
Room 4826
2201 C Street, N.W.
Washington, D.C. 20520

Shirl Kinney
Deputy Assistant Secretary
for Communications and
Information
NTIA
Department of Commerce
Room 4898
14th Street & Constitution, N.W.
Washington, D.C. 20230

Suzanne Settle
 Senior Policy Advisor
 Department of Commerce NTIA
 Room 4701
 14th St. & Constitution, N.W.
 Washington, DC 20230

Jack Gleason,
 Acting Administrator
 Office of International
 Affairs
 Department of Commerce NTIA
 Room 4701
 14th St. & Constitution, N.W.
 Washington, DC 20230

Larry Irving
 Assistant Secretary for
 Communications and
 Information
 Department of Commerce NTIA
 Room 4898
 14th St. & Constitution, N.W.
 Washington, DC 20230

Barbara Wellberry
 Chief Counsel
 Department of Commerce NTIA
 Room 4713
 14 St. & Constitution Ave. NW
 Washington, DC 20230

Cathleen Wasilewski
 Attorney Advisor, Office of
 Chief Counsel
 Department of Commerce NTIA
 Room 4713
 14th St. & Constitution N.W.
 Washington, DC 20230

John Dalton
 Secretary of the Navy
 Office of the Secretary
 Department of the Navy
 The Pentagon
 Washington, DC 20310

Dr. James E. Soos
 Deputy Assistant Secretary
 of Defense for C3
 Room 3E194
 6000 Defense Pentagon
 Washington, DC 20301-6000

Carl Wayne Smith, Esq.
 Code AR Defense Information
 Systems Agency
 701 South Courthouse Road
 Arlington, VA 22204

Office of General Counsel
 National Security Agency
 9800 Savage Road
 Fort Meade, MD 20755-6000

Robert S. Koppel
 VP - Legal & Regulatory
 Affairs
 IDB Worldcom
 15245 Shady Grove Road
 Suite 460
 Rockville, MD 20850-3222

John Scorce
 MCI International, Inc.
 1801 Pennsylvania Ave., N.W.
 Washington, DC 20006

Gail Polivy, Esq.
 GTE Hawaiian Telephone Company
 1850 M Street, N.W.
 Washington, DC 20036

Keith H. Fagan
COMSAT Communications
6560 Rockspring Drive
Bethesda, MD 20817

Michael Fingerhut
Leon Kestenbaum
Kent Nakamura
Sprint Communications
Company L.P.
1850 M Street, N.W.
Washington, DC 20036